

Preh Touch Commander and Preh Screen Commander

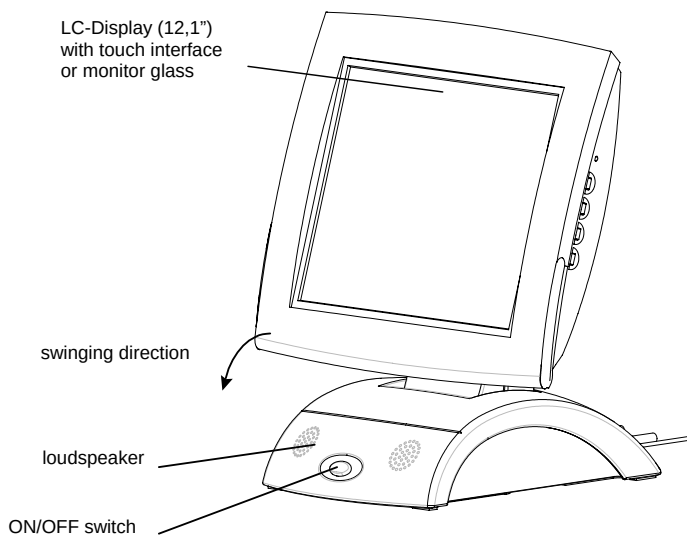
User Manual and Technical Data
MC12T4



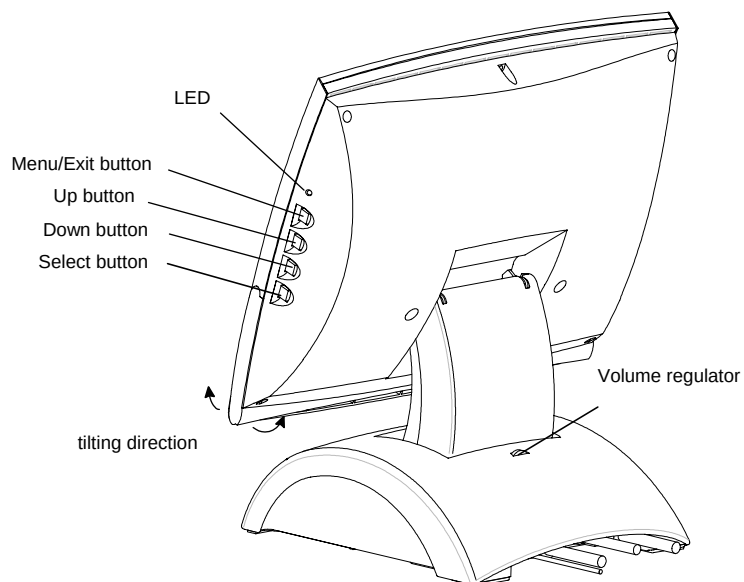
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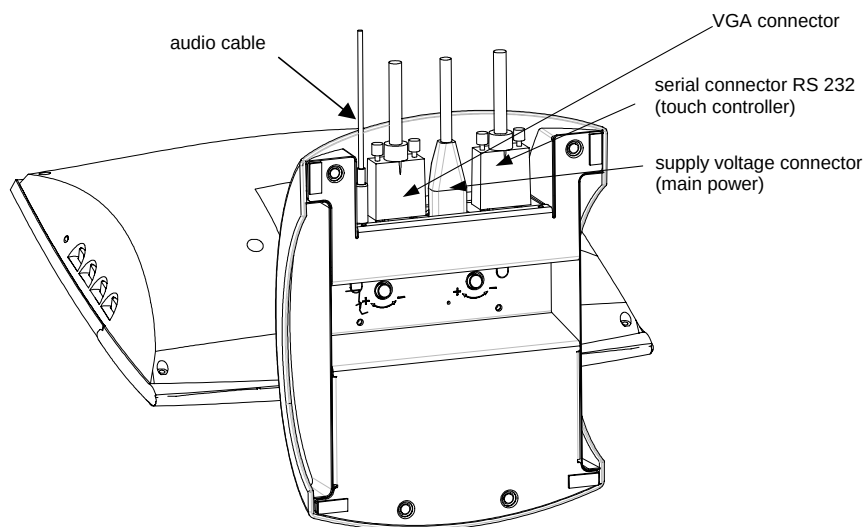
Model with multimedia base



Pict. 1: front view

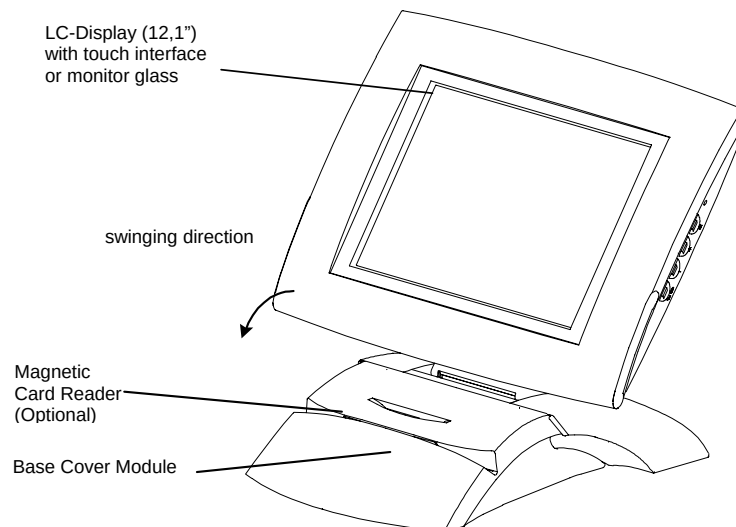


Pict. 2: rear view

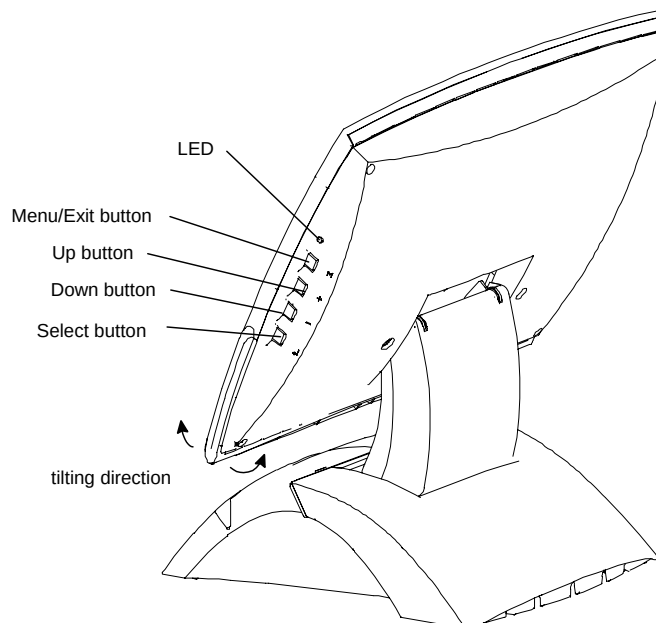


Pict. 3: bottom view

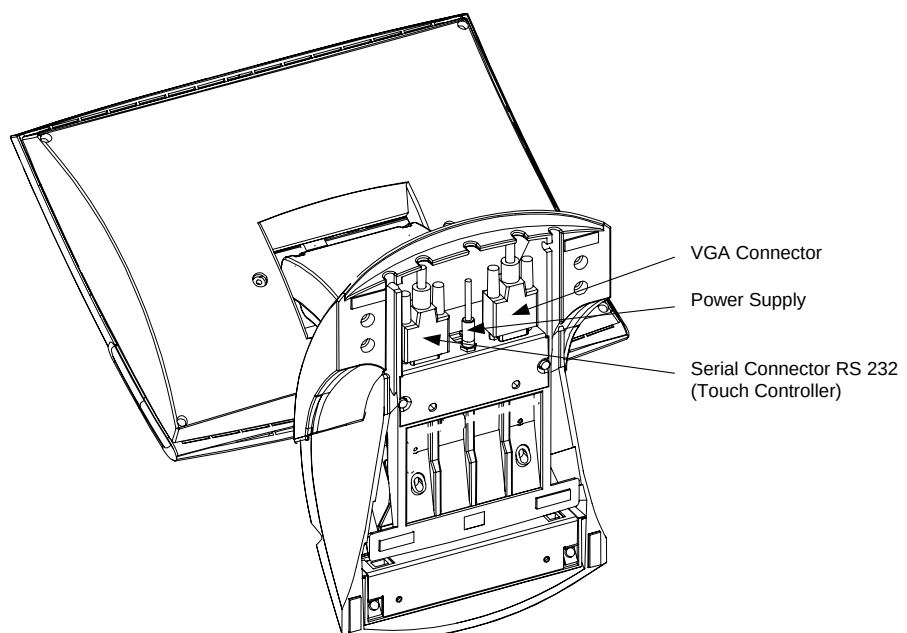
**Model with
modular base**



Pict. 4: front view

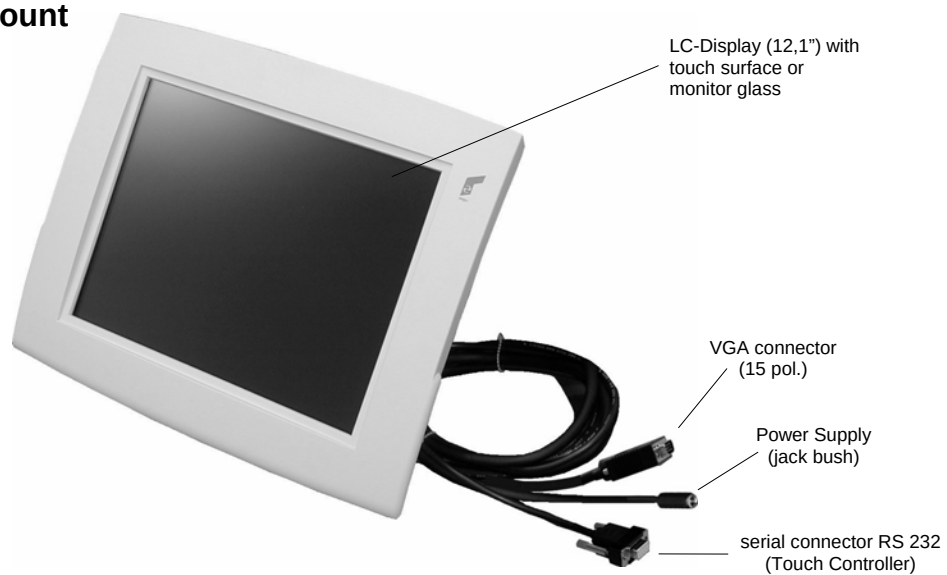


Pict. 5: rear view



Pict. 6: bottom view

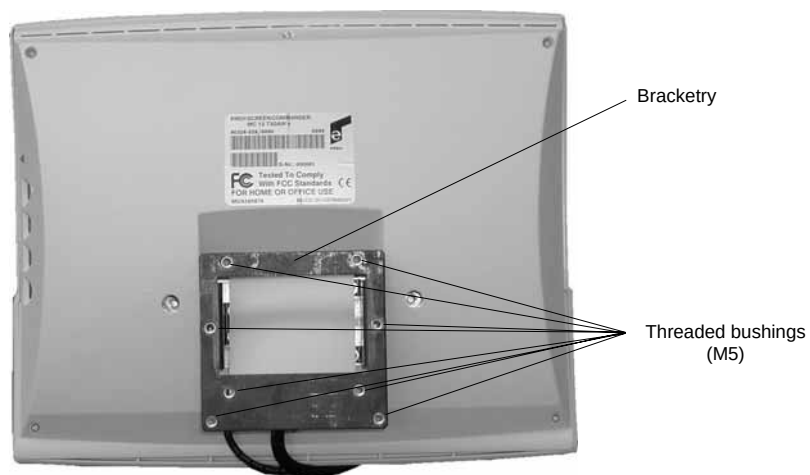
**Model with VESA bracketry
for pole or wall mount**



Pict. 7: front view



Pict. 8: rear view I



Pict. 9: rear view II (bracketry)

1 General Points

The Preh Touch Commander serves as graphical input device which makes the screen of the computer react immediately on touching graphical operating characters (symbols, keys, printings etc.). In this way the touchscreen allows simple, interactive handling of a computer even for the PC-inexperienced user. For example this input media offers the possibility of reducing training time and costs for the operating staff via a comfortable user's dialogue. With its ergonomic design and its comfort in handling the Preh Touch Commander is applicable in the fields of medicine, commerce, gastronomy, fast-food as well in the restaurants and hotel business.

The Preh Touch Commander consists of two logical units, the active matrix color LDC (TFT) and the highly sensitive touch sensor. These two units must be considered different from each other in regard to their function. This means that the appearance of the picture on the LCD (screen) is to be considered independent of the touch drivers. As far as the computer is concerned the system is connected with the VGA output (LCD) as well as with a serial interface (touching function).

The Touch Commander can thus take over the function of monitor and mouse. A standard mouse can be used along with the Touch Commander. Both a standard mouse and the Touch Sensor will control the position of the cursor on the screen.

The Preh Screen Commander is without a touch surface. Instead of a touch sensor, you will have an anti-reflective, protective glass. In this case you do not have a touch function on the screen. You will have a high quality TFT monitor.

The active matrix Color LCD (TFT) has a diagonal of 12,1" (307 mm) with a resolution of 800x600 pixels as well as 262,144 colors. The display has an especially high degree of brightness (typ.300 cd/m²) and color brilliancy. The LCD parameters as for example brightness, contrast, picture position etc. are adjustable via the On Screen Display (OSD).

The analog resistive 5 wire touch technology has a resolution of 1.024x1.024 points. Inputting data is done by touching it e.g. with a finger. The activation force necessary to register a touch is 1N. The touch surface consists of a hardened polyester foil with a high resistance against scratches and an insensitivity to dirt, oil and water splashes. The durability of the touch sensor is 35 million single actuation per touching point.

Multimedia models allow the possibility of giving the user audio feedback via sounds and tones. The volume can be adjusted by a rotary control on the rear side of the base.

The Preh Touch / Screen Commander with modular base enables the simple swapping of the base cover modules in exchange for an independently-programmable MC keyboard series (MC80WX, MC84WX, MC128WX, MC140, MC147, MF112C). The optional integration of a magnetic- and/or Smart Card reader into the cover module is provided for.

The Preh Touch / Screen Commander can also be used with optional VESA bracketry for wall mount or pole mount hardware.



Pict. 10: Example for adjustable
Wall mount solution



Pict. 11: Example for adjustable
telescope pedestal (pole mount)

2 Contents of packing

Prior to operating your Preh Touch / Screen Commander, please check whether the following parts are included and are in undamaged condition:

- 1 Preh Touch Commander or Preh Screen Commander
- 1 CD-Rom with touch driver for the operating systems DOS, Windows 3,1x/9x/NT/2000 and OS/2.
- 1 Operator's Manual
- 1 VGA cable
- 1 serial cable (not included with Screen Commander)
- 1 power cable
- 1 audio cable (only included with multimedia version)

For the models with the modular base or VESA mount bracket version there is a power supply (12 V, min. 2 A) included.

3 Installation of Touchscreen

Please read the following instructions prior to starting to use the Preh Touch / Screen Commander!

The following steps are necessary for a correct function of the device:

- 1 Adjust your computer for the proper video resolution [800x600 / 60 Hz] and switch it off, connect Touch / Screen Commander, switch on computer and Touch / Screen Commander (see chapter 3.2). If you asked for confirming the new hardware "standard monitor", confirm according to display instructions.
- 2 Adjust the video display on the Touch Commander/Screen Commander for graphic card in the computer by means of menu point "AUTO TUNING" of the OSD. This step is important for the best quality of representation (see chapters 3.3).
- 3 Only Touch Commander:
Installation of touchscreen driver for the corresponding operating system (see chapter 3.5).

The Touch Commander / Screen Commander with the modular base or VESA mount bracket must be operated with the supplied original power supply.

3.1 Operating Conditions for the System

The Preh Touch Commander / Screen Commander has been developed for the use with PC graphic adapters in SVGA-setting with 800x600 pixels of resolution. As an operating system it is necessary to have either a DOS version 3.3 (or higher), Windows 3.1x, Windows 9x, Windows NT, Windows 2000 or OS/2. For multimedia models a sound card with "Line Out" outputs for generating sounds is necessary in addition.

3.2 Cable Installation and System Settings

The installation of the cables must be done **with the computer switched off**. Set the correct screen resolution first. The optimum resolution is 800x600 pixels and the refresh rate 60 Hz.

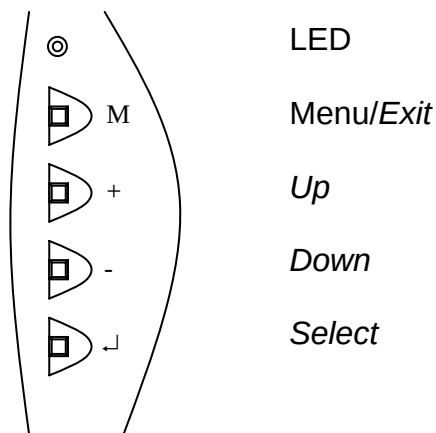
To begin connect the VGA cable and the RS232 cable as well as the audio cable (multimedia models only) (see pict. 3 and pict. 6). Then plug in the AC power cable to the socket (see pict. 3).

If you now switch on the computer, the LED lights up green after about 3 seconds and the corresponding picture appears on the screen. If the computer is in suspend or standby mode the LED is red.

If the SVGA cable between Touch / Screen Commander and computer is disconnected, the LED lights up red.

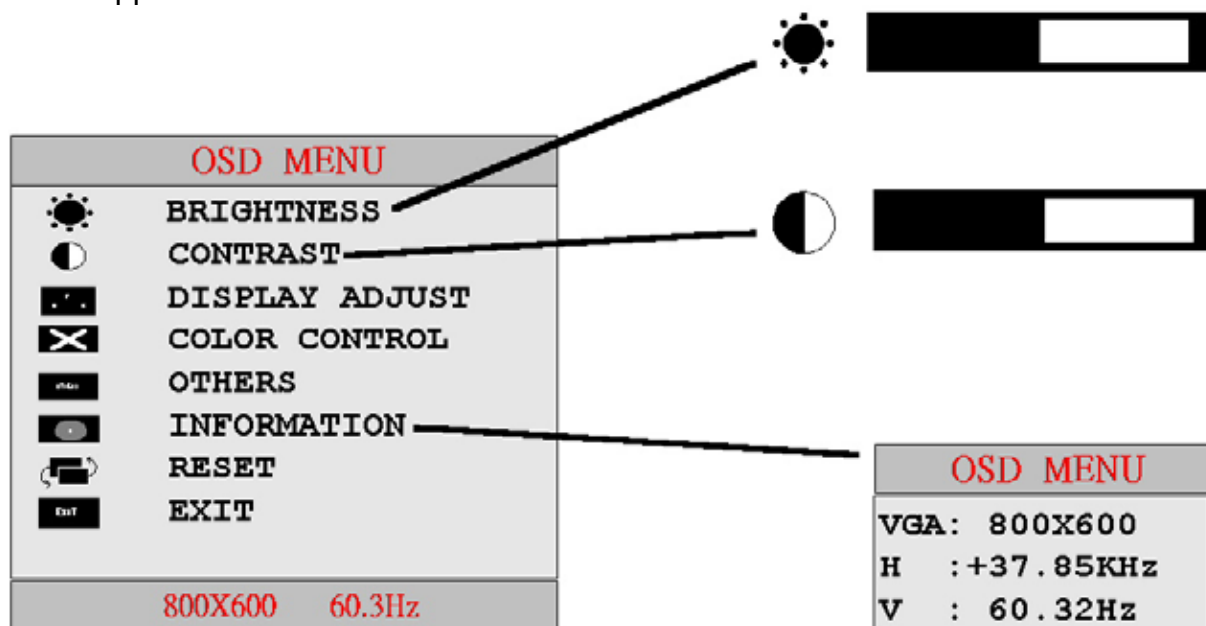
3.3 On Screen Display (OSD)

For setting the LC Display you find 4 keys on the right-hand side of the housing (see pict. 12).



Pict. 12: Description of the keys for operating the On Screen Display.

The On Screen Display can be initiated with either of the 4 keys. First of all the main menu appears.



Pict. 13: On Screen Display

The various sub-menus or menu points are selected by the UP and DOWN keys; they are opened with key SELECT. With key MENU/EXIT you leave the On Screen Display whereby the settings made will be memorized. If you have changed a setting you can leave the corresponding point with SELECT.

The screen resolution and the refresh rate of the current picture signal is shown in the status display.

BRIGHTNESS

With the keys UP and DOWN the brightness of the picture can be increased or decreased.

CONTRAST

With the keys UP and DOWN the contrast of the picture can be increased or decreased.

INFORMATION

This Menu point shows the parameters of the actual picture.

RESET

Activating RESET will reset all parameters to the default value.

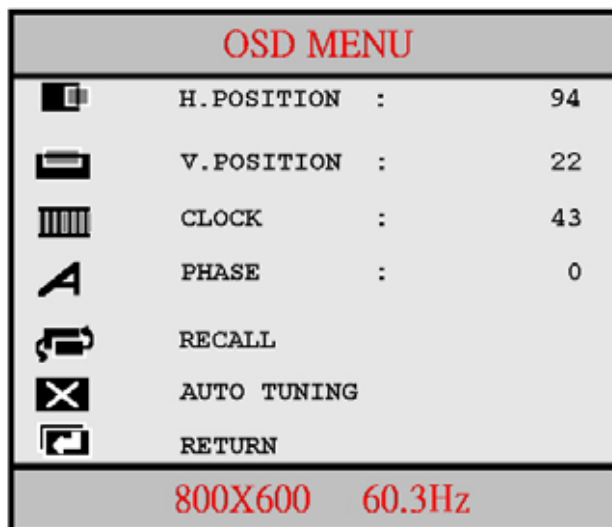
EXIT

With the menu point EXIT you will jump to the corresponding overriding menu. The settings made are memorized thereby.

All Submenu have a menu point RECALL and RETURN. With RECALL the setting before entering this menu will be recalled. With RETURN the settings will be stored and the OSD returns to the upper menu level..

Submenu DISPLAY ADJUST

With this menu the picture geometry and fine tuning can be changed:



Pict. 14: Submenu DISPLAY ADJUST

HORIZONTAL POSITION

With this menu point the picture can be moved by using keys *UP* (right) and *DOWN* (left).

VERTICAL POSITION

With this menu point the picture can be moved upwards and downwards by using keys *UP* and *DOWN*.

CLOCK

With this menu point the picture can be made wider or narrower by using keys *UP* and *DOWN*. On false adjustment of this parameter vertical stripes may appear in the picture.

PHASE

With this menu point the picture definition can be adjusted and horizontal interference stripes removed.

AUTO TUNING

Position, Clock and Phase will be set automatically to the best possible value.

Important note to menu point AUTO TUNING:

Most graphic cards differ in regard to their video signals sent out. For this reason it could happen that the Touch / Screen Commander must be readjusted on connecting it with another computer. The pre-adjustment of the Touch / Screen Commander was done in a way that it produces good results with a possibly great number of graphic cards. An optimum adjustment cannot be obtained with every combination of resolution and refresh rate, however, a good picture quality should be achieved with each resolution.

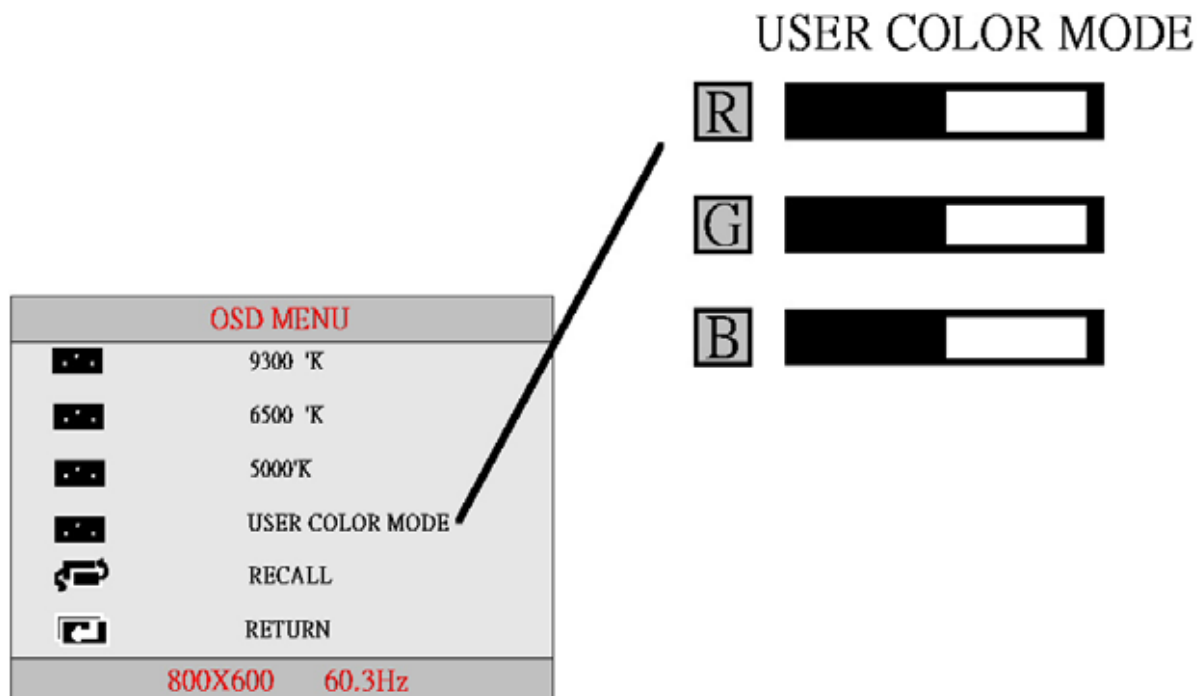
With an adjustment under Windows it would be best to go to Start Button/"Shutdown Windows" screen. This will "gray out" the desktop, but not actually shutdown your computer. Activate the menu point AUTO TUNING (by pressing three times the key SELECT, when the OSD was off). By doing this, the display tries to find the best possible adjustment. With DOS, the program EDIT is used instead of picture "Shutdown Windows".

A fine adjustment which might be necessary can be carried out with point PHASE in menu DISPLAY ADJUST. For this fine adjustment you should use either picture "Shutdown Windows", a test picture or a monitor test program. In the file: \Touch\Montest (CD Rom) you will find a monitor test program for the different operating systems.

Besides, the adjustment must be made individually for every video mode (resolution) to be used. In addition it must be observed that prior to setting the display the graphic card had been adjusted for the correct parameters (resolution, color ...). In case of connection with a notebook it might be necessary to deactivate the internal display of the notebook in order to obtain a good representation.

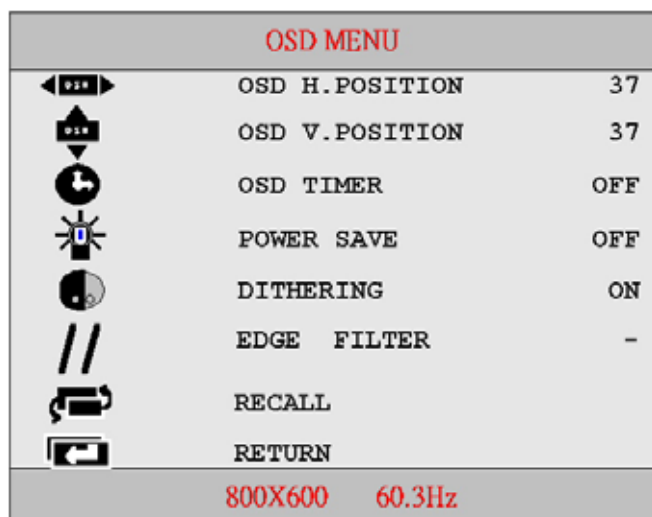
Submenu COLOR CONTROL

With this menu the picture color can be adjusted. Three color models are preselected (9300 K, 6500 K and 5000 K). In the submenu USER COLOR MODE the saturation of each of the three main color parts of the picture can be adjusted individually. Consequently the color tone can be adapted to the individual preference of the user.



Pict. 15: Submenu COLOR CONTROL

Submenu OTHERS



Pict. 16: Submenu OTHERS

OSD H. POSITION

With this menu point the horizontal position of the OSD menu (left/right) can be adjusted on the display.

OSD V. POSITION

With this menu point the vertical position of the OSD menu (up/down) can be adjusted on the display.

OSD TIMER

With this menu it can be adjusted for how long the menu is to be shown on the screen after pressing a OSD button.

POWER SAVE

The monitor could status in low power mode, if POWER SAVE is ON

DITHERING

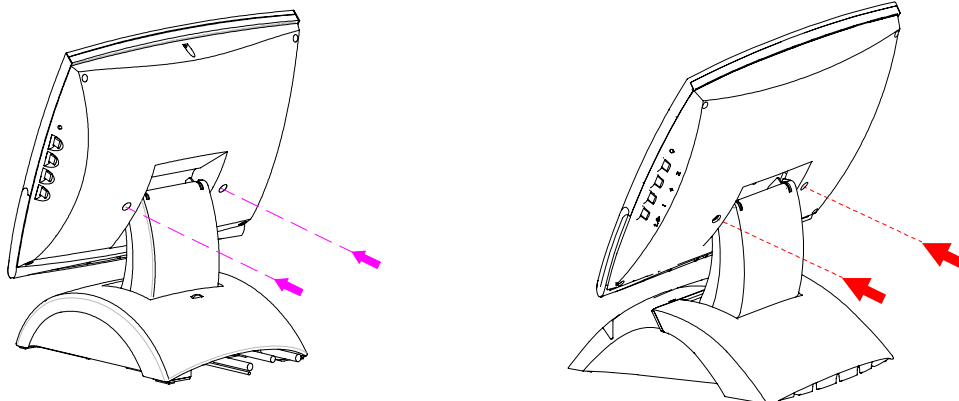
Should be set to ON. Special Applications could claim the setting OFF.

3.4 Mechanical Adjustment of the LCD Position

The LCD position on a VESA Mount Preh Touch / Screen Commander cannot be changed directly at the Product. The adjustment (tilting or swinging) of the Touch Screen Commander depends on the pole or wall mount hardware used.

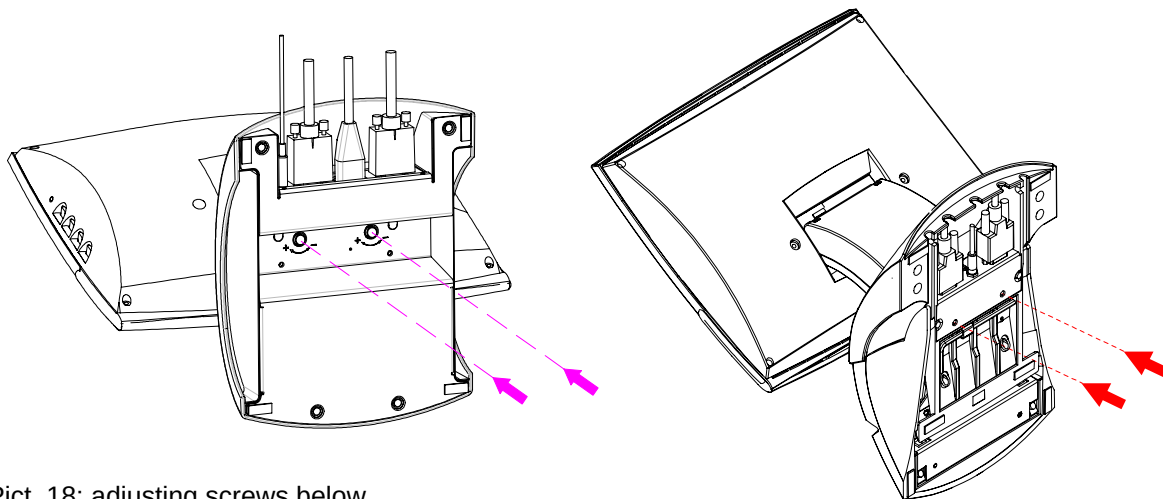
The LCD of the Preh Touch / Screen Commander is swingable and tillable. According to the usage the LCD position can be changed.

The right picture shows the model with the modular base.



Pict. 17: adjusting screws on rear side

The infinitely variable adjustment of the tilting force can be made with two adjusting screws located on the rear of the monitor. The adjustment torque (1 - 8 Nm) should be about the same on both screws.



Pict. 18: adjusting screws below

The infinitely variable adjustment of the swinging force can be made with two adjusting screws in the base of the monitor. The adjustment torque (1 - 8 Nm) should be about the same on both screws.

Note: On changing the housing position you should be careful to not get your fingers too near to the opening on the rear side of the housing as they might get pinched there.

4 Driver Installation

Important Note:

A new calibration is always necessary if another touchscreen was connected to the computer or if the screen resolution was changed. This means that the calibration between touchscreen and computer is adjusted to the mechanical features of the particular touchscreen which was connected to the computer at that time.

A serial Accu Touch Controller E271-2210 (Controller model Smart Set 2xx0) is integrated into the Preh Touch Commander. The default setting is 9600 Bps. Normally this is clearly recognized by the setup programs. If, however, it is not clearly recognized, the adjustment can be done manually or by restarting the corresponding setup program.

Information for the driver installation is in the file:

D:\TOUCH\ELO\README.TXT

You can find detailed information in the path, named with your operating system. (The CD-ROM drive of your Preh-CD is here defined with the letter „D“).

5 Care

Before cleaning, switch off the power supply. A soft cloth moistened with a mild cleaning agent can be used for cleaning the housing. For cleaning the screen it is better to use a soft paper towel moistened with a mild household cleaning agent. For cleaning the surface do not apply the cleaning liquid directly but use a moistened paper towel. Please avoid getting liquid into the housing.

6 Troubleshooting

6.1 General Points

Attention:

The Preh Touch / Screen Commander does not contain any electronic components that can be replaced or repaired by the user. Consequently you should not try to do your own repair work. Moreover, you would lose all warranty claims for this product. Activating the touch sensor surface must not be done with a sharp object, such as credit card, long finger nails, ring, etc. Sharp or pointed objects will cause damage to the touch sensor and are not covered under warranty

If the Touch/Screen Commander must be returned for service, it must be packed in its original packing material. If this is not done, the sender will be made responsible for possible transport damage.

6.2 Diagnostic Program

The diagnostic program COMDUMP is located in the path D:\TOUCH\MONTEST. It is started in DOS mode or command prompt whereby the COM connection must be stated; the baud rate is optional.

COMDUMP <number of COM port 1 or 2> [baudrate]

COMDUMP will then show you the data coming from touchscreen to COM port in hexadecimal data on the screen. If you now contact the touch sensor the sent data should be seen on the display.

6.3 Troubleshooting list

A lot of malfunctions can be traced back to incorrect or loose cable connection. So please make sure that all plug connections are correct and secured.

Fault	Possible cause	Remedy
LED on Touch / Screen Commander remains dark	voltage supply not in order	check plug-in connection of power supply
	computer switched off	switch on the computer
LED on Touch / Screen Commander lights up red and no picture appears	VGA cable is not correctly connected	check cable connection of VGA connection
The display shows only part of the picture or the picture is distorted	choice of display resolution is wrong	check for correct display resolution it should be 800x600 or less
	display adjustment insufficient	see notice to adjustment of in chapter 3.3
LCD shows indistinct vertical stripes	display ("HORIZONTAL SIZE") is insufficiently set	set horizontal size of picture in menu IMAGE POSITION of OSD(see chapter 3.3.2)
LCD shows fine horizontal stripes	display ("PHASE") is not correctly adjusted	adjust PHASE in menu BASIC-SETTINGS of OSD (see chapter 3.3.1)
Touch does not work under DOS and Windows 3.1	RS 232 cable connection incorrect	check serial cable connection and restart computer. During booting procedure look out for error indication of the driver. Check touchscreen with diagnostic program COMDUMP(see chapter Diagnostic Program)
Touch cannot be calibrated under the operating systems of Windows, button "calibrate" is deactivated	cable connection incorrect	check serial connection, restart computer
Calibrating program states error when called up	touchscreen driver not correctly installed	Set the driver again with SETUP or with button setup in the calibrating program. Here the serial connection should be correctly entered and the correct controller (E271-2210) or controller model (SmartSet 2xx0) should be selected. Check the serial cable connection

6.4 Additional help

If you have problems with the connection and the installation of the Preh Touch / Screen Commander, please contact your dealer.

You can contact Preh KeyTec Technical Support at:

Germany / world wide:

Email: support@preh-keytec.de

fax: +49 (9771) 92-152

USA / America:

E-Mail: techsupport@preh.com

fax: +1 847-438-4053

7 Technical Data

Electronics:

Following specifications are for the **multimedia model** only:

Line voltage: 100-240 AC, 50-60 Hz, 0,7-0,4A

Power consumption max. 20 W

Following values are valid for the model **with modular base or VESA mount bracketry** only:

Operating Voltage: 12 V $\pm$ 5% (100-240VAC, 50-60Hz, 1.0A)

Ripple: < 100 mV

Power Consumption max. 18 W

The values in brackets are for the power supply delivered with the Touch / Screen Commander.

The Touch Commander / Screen Commander with the modular base or VESA mount bracketry must be operated with the supplied original power supply or with power supplies which are approved by Preh.

For use only with power Adapter:

Vender1: Chi Sam Model: CH-1204

I/P: 100-240 Vac, 47-63 Hz, 1A

O/P: 12Vdc/4A

Vender2: Lien Model: LE-9702B

I/P: 100-240 Vac, 47-63 Hz, 1A

O/P: 12Vac/4A

Display:

Type:	TFT active matrix
Size of screen	246,0x184,5 mm (12,1")
Brightness:	typ. 300 cd/m ²
Viewing angle Range:	45° ... 45° (left/right) 10° ... 30° (up/down)
Contrast:	typ. 150:1
Resolution:	max. SVGA 800x600 (RGB)
Colors:	262.144 (6 Bit RGB)
Refresh rate (vertical):	70 Hz / DOS text mode 70 Hz / 640x350 60 Hz / 640x480 60 Hz / 800x600
Life of background illumination:	typ.50.000 h

Touch:

Interface:	RS232, Mouse Emulation under DOS, Windows 3 x, Windows 9x, NT, 2000 and OS/2
Technology:	5-wire resistive (AccuTouch)
Resolution:	min. 1024x1024
Surface:	hardcoated polyester foil
Transmission:	75%
Controller:	E271-2210/Smartset 2xx0
Durability	35 million actuation

ESD and EMC compliance:

CE-sign (see also Statement of confirmation)

Radiated Emissions: EN55022, class B
FCC part 15, class B (class A for modular base)

Susceptibility

Compliance:

1. electrostatic discharge according to EN 61000-4-2 (hardness air +,-8KV and contact +,- 4KV)
2. high frequency electromagnetic fields EN 61000-4-3 (hardness Modulation 3 V/m),
3. fast transient/burst immunity electrical interference features according to EN 61000-4.4 (Criteria B: hardness 1 kV for AC power)
4. Surge immunity test according to EN 61000-4-5 (Criteria B)
5. Immunity for conductive disturbance test according to EN61000-4-6(Criteria B: level is 3V Modulation)
6. power frequency magnetic field test EN 61000-4-8 (Criteria B: 1A/m)
7. voltage dips , short interrupt and voltage variation immunity EN 61000-4-11(Criteria B)
8. power harmonics test EN 61000-3-2(Criteria A:<=75W)
9. voltage fluctuation test EN 61000-3-3

Durability of mechanical bearing parts:

Tilting and swinging 1.000 cycles typical

Environmental conditions:

Operating temperature: 0°C...40°C
Storing temperature: -10°C...60°C
Relative humidity of air: 10%...90% (at max. 35°C)
Air pressure: 700hPa...1060hPa

8 Safety issues:

Please read these instructions carefully before connecting the unit to any AC-mains and keep the instructions also for later use.

The multimedia type is belong to Class I type and the others (modular and wall mount) are belong to Class III type for power consuming configuration.

First check the power values of your AC-mains with the datas of this device, before connecting to any wall-plug socket.

Place the unit as close as possible to your wall-plug socket and make sure, that the mains connector is easily accessible. Make also sure, that there are no other equipments placed on the cable and also that it's placed in a way, that nobody can fell over it. If the unit is not in use for a longer period, it should be disconnected from mains.

Protect the device from any liquids and high humidity. Do not operate the unit outdoors.

Unplug the device from the wall-plug socket immediately and have it checked by a qualified Service person in case:

- the mains cable or connector is being damaged
- liquids have been penetrated into the device
- the device has been exposed to the elements (dampness/rain)
- the device does not operate as to the operating instructions
- the device has been dropped and / or shows outside damages (i.e. cabinet)
- the device shows markable performance of deffects

Do not open the device on your own as there is dangerous voltage inside. Apply to the Service or your dealer for any repair issues.

Do not drink liquid crystal leaking from the LCD in case of a damage. If such leakage touches your skin, clean it by water & soap, immediately.

The working place related sound pressure level (DIN 45 645) of the device is less then 70dB(A)

It is only permitted to use tested / certified power cables H03VV-F.3G, 0.75 and / or better ones.

The maximum environment temperature is 40 degrees Celsius

GS and ISO 9241-7 for class III certified Screens will meet its classification under the following conditions:

- the operation of the screen complies to suitable working place illumination environment
- the screen shall not be placed in front of a window or direct light

9 Further Information

All Preh products are subject to a continuous process of improvement. For this reason we reserve the rights of technical modifications.

We point out that inadequate handling, storage, influence and/or modification can cause disturbances and damage in usage.

In case you modify our products in any way we do not assume warranty and liability unless you have an explicit release in writing for your specific case.

This applies especially to unprofessional repair and maintenance jobs.

Any claims for damages against the Preh works – no matter for which legal reason – are excluded if no intention and gross negligence can be proved. Above limitation do not apply to claims for damages out of the product liability law.

This Operator's Manual is exclusively valid for the product Preh Touch / Screen Commander supplied with it.

10 Warranty

Preh guarantees that all products supplied are free from production and material faults. The period of warranty is two years and begins with the date of delivery.

Otherwise the general sales conditions of the Preh company are valid.

11 Statement of Confirmation

This is to certify that statements of confirmation are available for all different versions of the Preh Touch / Screen Commander.

You can request a copy from Preh stating the exact type description (see type label on the bottom of the device).

Preh KeyTec GmbH
An der Stadthalle
D-97616 Bad Neustadt an der Saale
Fax: +49 (9771) 92-105

12 FCC Warning Statement

Note: This equipment has been tested and to comply with the limits for Class B or Class A (modular base) digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment on and off, the user is encouraged to try to correct the interference by one of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Shielded interface cables must be used in order to comply with the emission limits.

Caution:

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

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